

Potential of EU forests in achieving climate targets



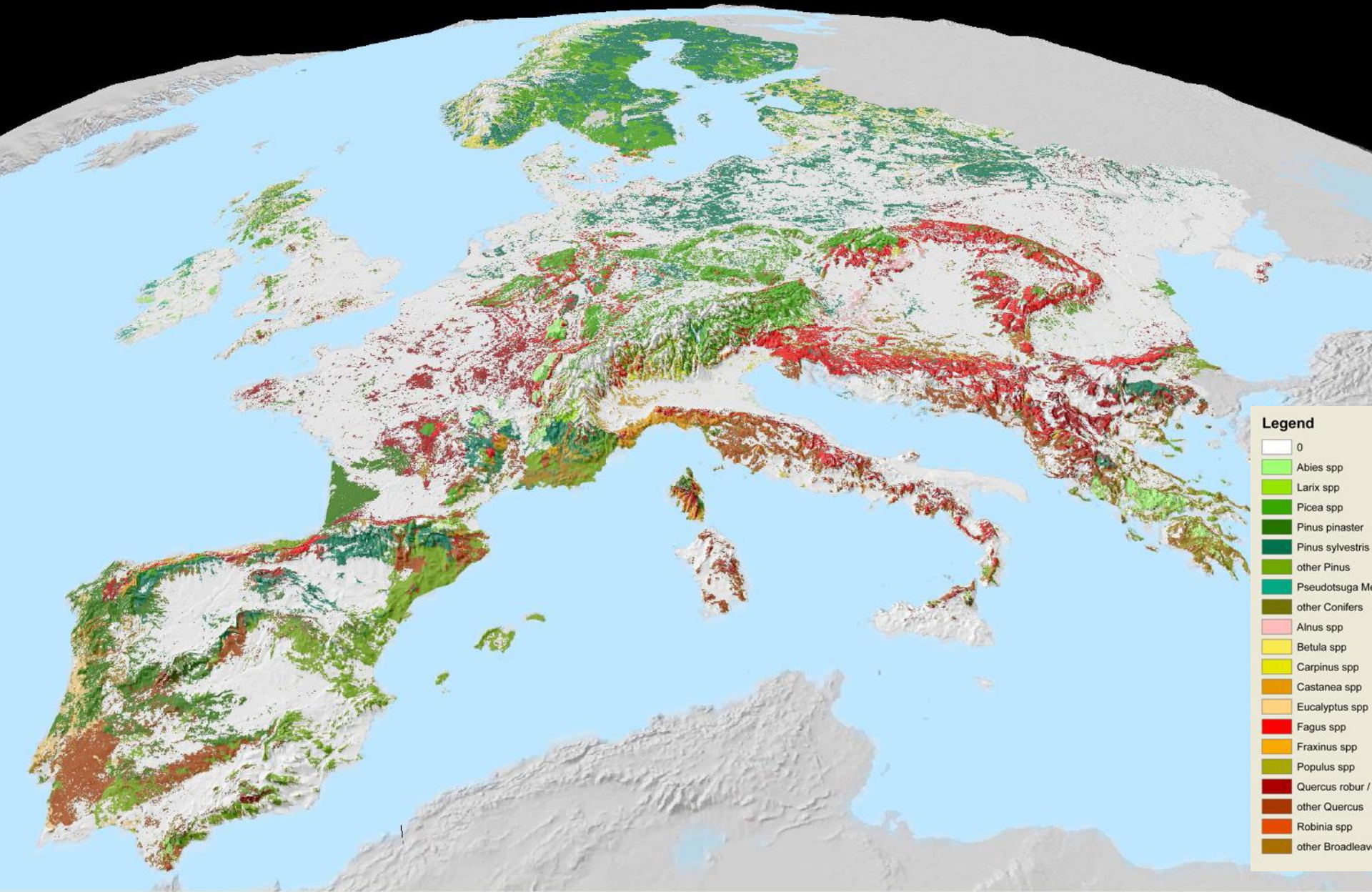
Gert-Jan Nabuurs
Professor European Forest Resources
Wageningen University
Brussels, EP intergroup 24 Jan 2017

1. European forests
2. Potential in mitigation
3. Climate smart forestry
4. Contribution of forest owner organizations

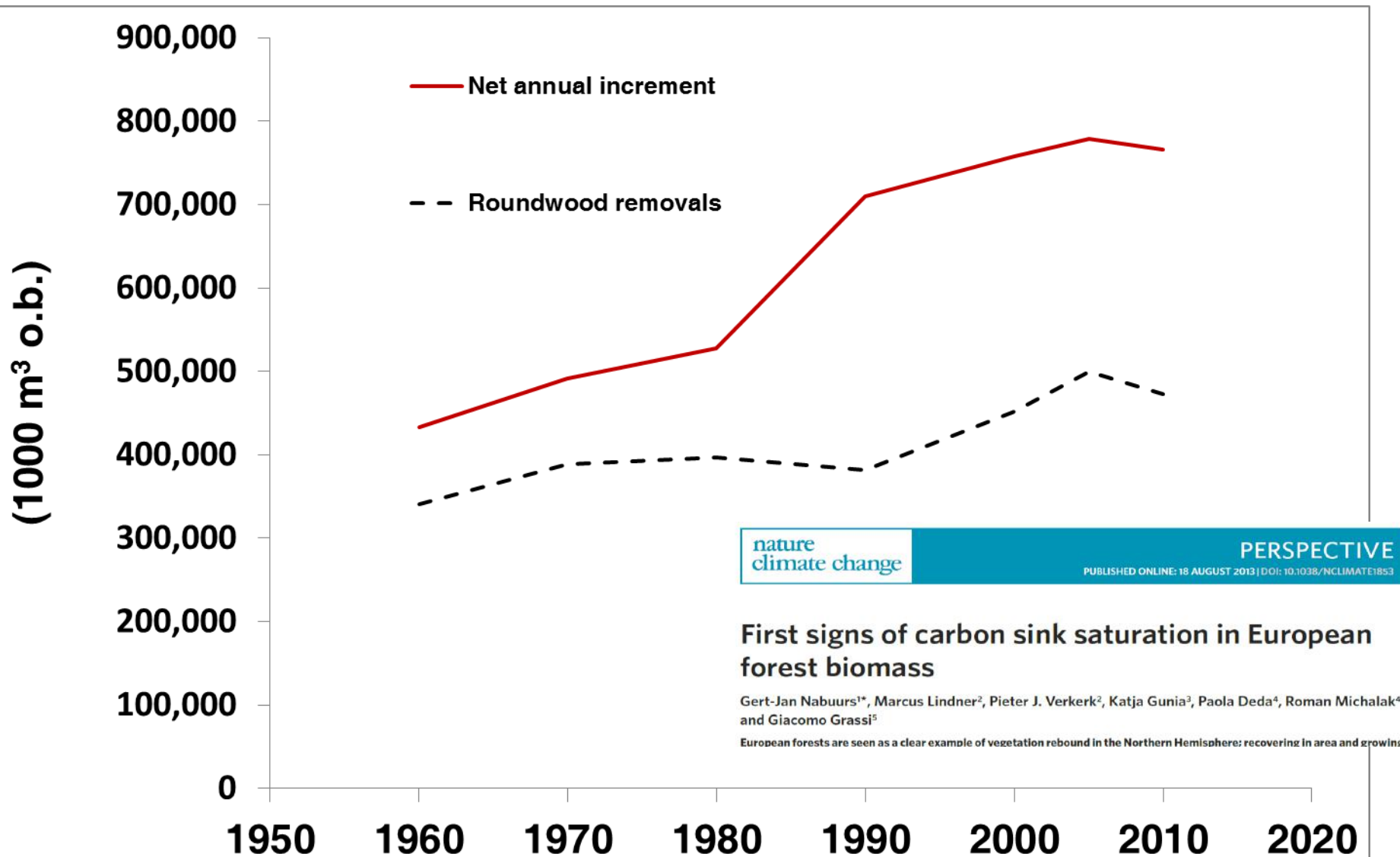


European forests, 1x1 km, tree species map

(Brus et al 2011)

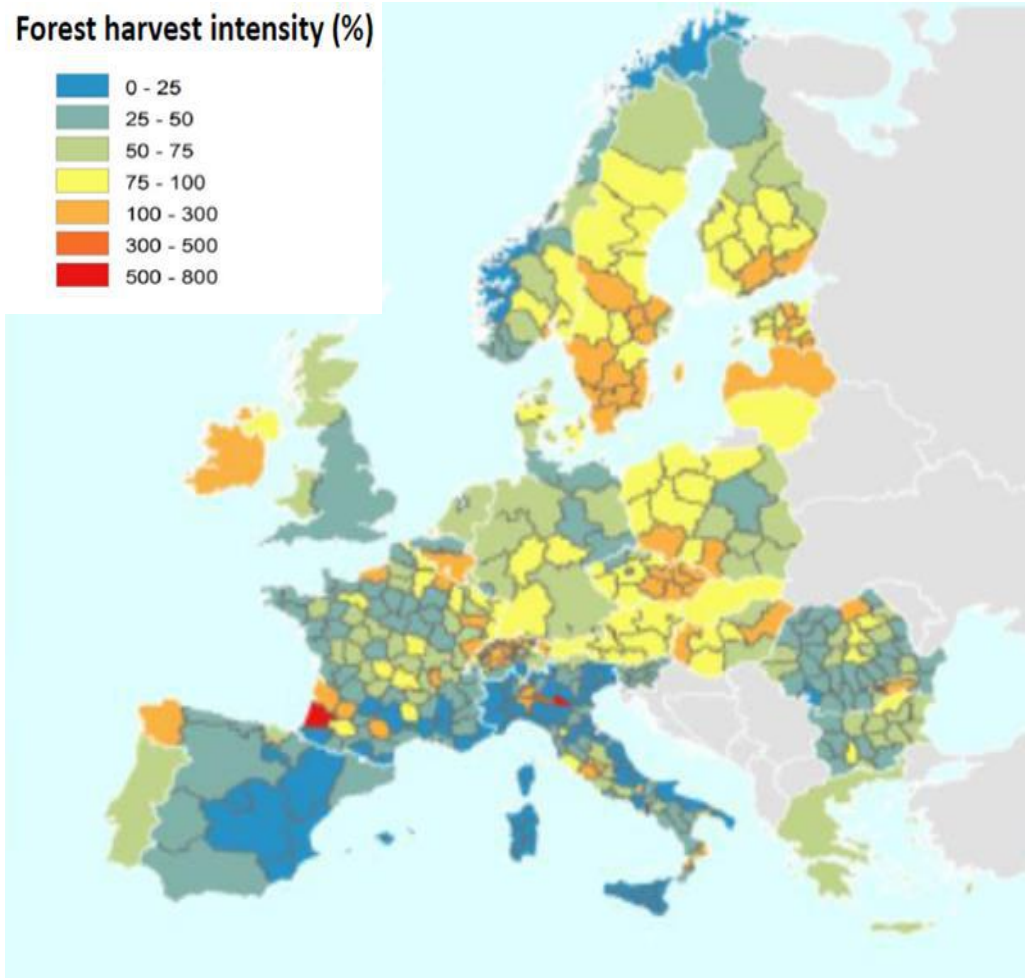
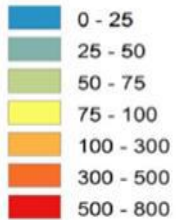


Growth & harvest at European scale



Harvest intensity varies a lot

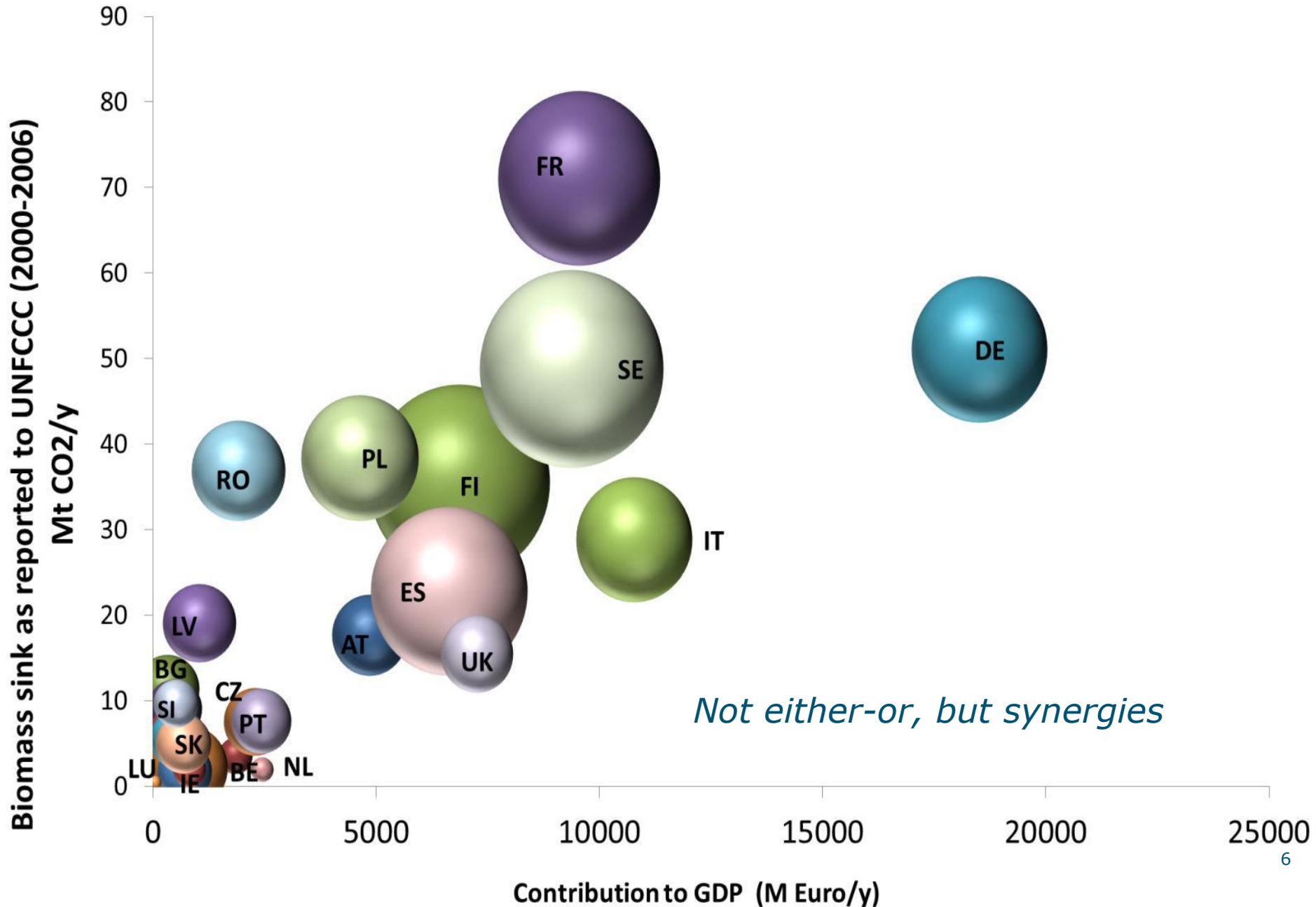
Forest harvest intensity (%)



■ EFISCEN: Harvesting intensity as % of increment (*Levers et al. 2014*)

■ *the variety is an entrance to design measures*

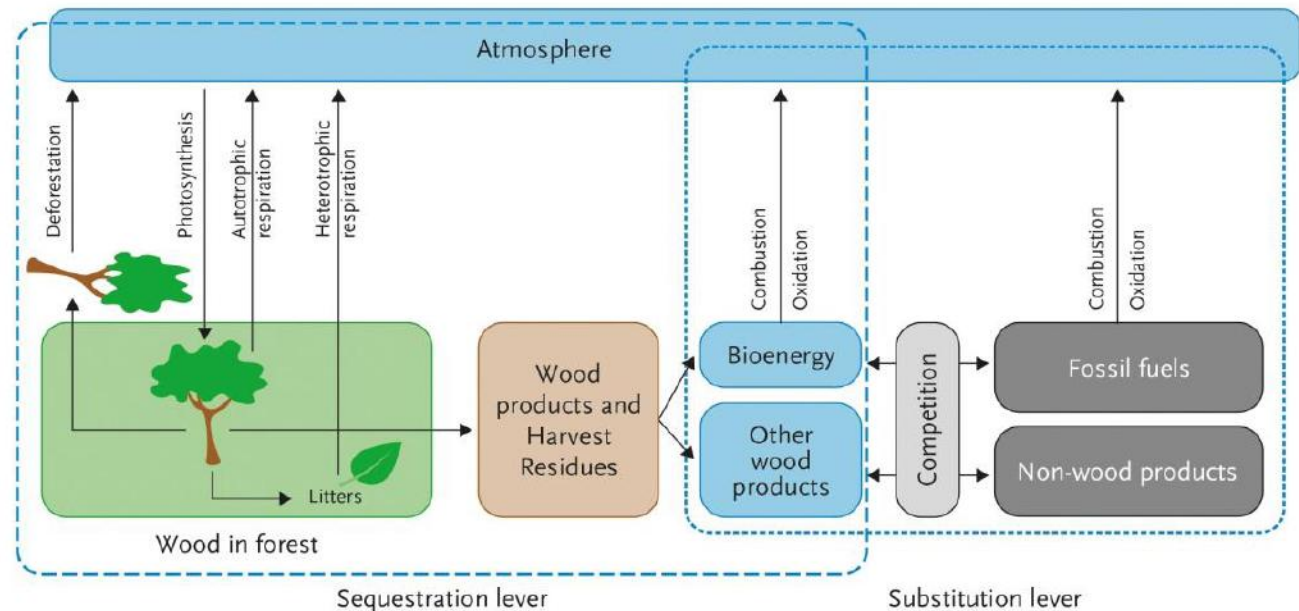
Correlation of GDP and CO₂ sink



Role and potential in CO₂ sink and substitution

Present role of the European forest

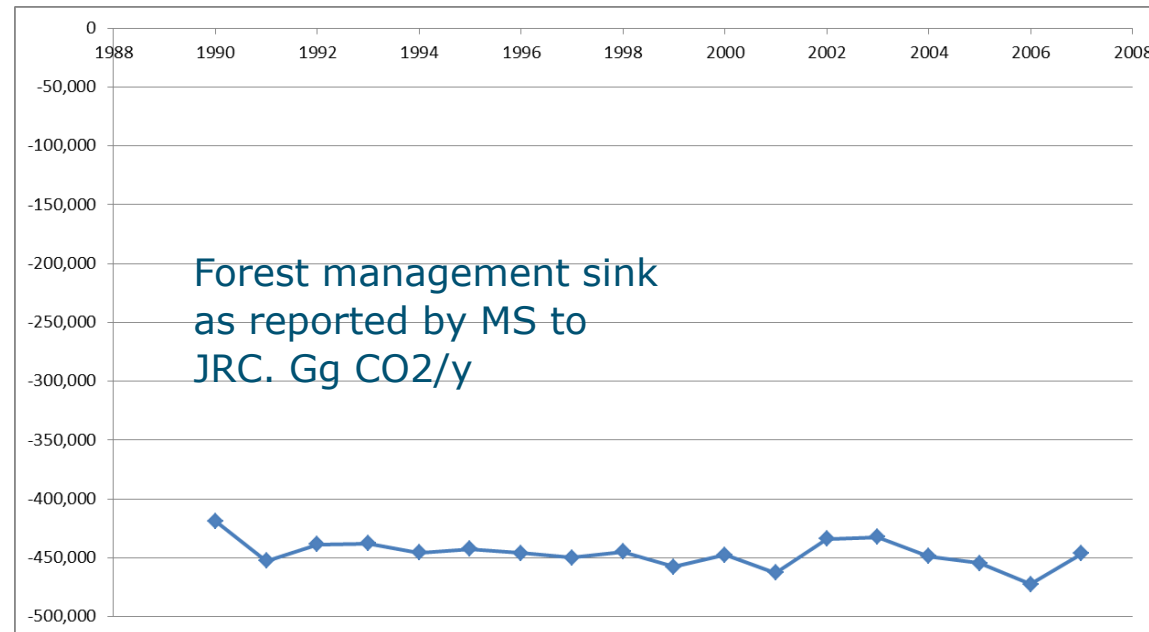
- Sink 450 Mt CO₂, or **10%** of emissions
- Wood products sink of 44 Mt CO₂ + substituting aluminum and plastics.
- Biomass for bioenergy provides 6-7% of total EU energy need



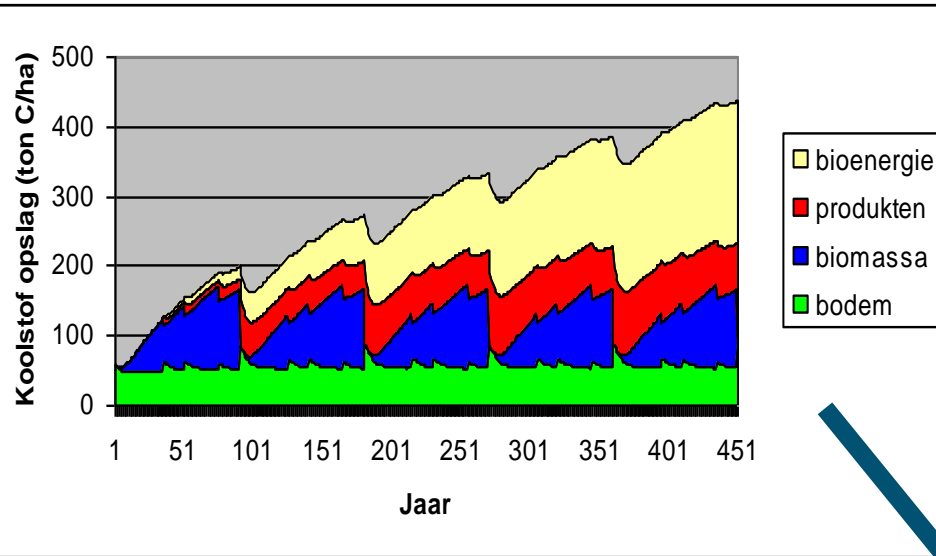
'we may loose the carbon', ..'trees burn',
etc

The only sector that has made a
consistent and significant
contribution, every year since 1990!

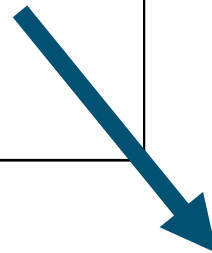
..ask Volkswagen what
they achieved in 25 yrs..



One stand through time versus a forest estate



CO2FIX model



Temporal variation becomes spatial variation.

Carbon continuously flows through the forest system, and large losses can occur locally. But at large scale a continuous build-up occurred in EU